**Before the**
**FEDERAL COMMUNICATIONS COMMISSION**
**Washington, D.C. 20554**

| | | |
|---|---|---|
| In the Matter of | ) | |
| | ) | |
| Improving Public Safety Communications in the 800 MHz Band | ) | |
| | ) | |
| | ) | WT Docket No. 02-55 |
| Consolidating the 900 MHz Industrial/ Land Transportation and Business Pool Channels | ) | |

# REPLY COMMENTS OF NEXTEL COMMUNICATIONS, INC.


NEXTEL COMMUNICATIONS, INC.

Robert S. Foosaner
Senior Vice President and Chief Regulatory Officer

Leonard J. Kennedy
Senior Vice President and General Counsel

Lawrence R. Krevor
Vice President – Government Affairs

James B. Goldstein
Senior Attorney – Government Affairs

2001 Edmund Halley Drive
Reston, VA 20191
(703) 433-4141

Regina M. Keeney
Charles W. Logan
Stephen J. Berman
Lawler, Metzger & Milkman, LLC
2001 K Street, NW, Suite 802
Washington, DC 20006
(202) 777-7700
Counsel for Nextel Communications, Inc.


August 7, 2002

## SUMMARY

Nextel Communications, Inc. ("Nextel") endorses the Private Wireless Consensus Plan (the "Consensus Plan") for improving public safety communications in the 800 MHz Land Mobile Radio Band. The Consensus Plan satisfies each of the Commission's public policy goals in this proceeding. The Consensus Plan addresses the fundamental spectral causes of CMRS - public safety interference, provides additional near-term spectrum to public safety in the 800 MHz band, and does so with minimal disruption.

The Consensus Plan represents an extraordinary consensus among all of the key stakeholders operating in the Land Mobile Radio Band. The leading national representatives of the public safety and private wireless communities, as well as Nextel, the single largest spectrum holder in the band, support the Consensus Plan. These parties worked together to develop the Consensus Plan out of the conviction that CMRS – public safety interference is a serious problem that will only become more severe without urgent corrective action. The numerous comments filed in response to the *NPRM* clearly demonstrate the urgency of resolving CMRS – public safety interference in the 800 MHz band and the crucial need for improved public safety communications capabilities.

Specifically, from the public safety community, the Consensus Plan has been endorsed by the Association of Public Safety Communications Officials-International, the International Association of Fire Chiefs, the International Association of Chiefs of Police, the Major Cities Chiefs Association, the Major County Sheriffs' Association, and the National Sheriffs' Association. These organizations represent the nation's first responders to emergencies and the critical communications systems upon which those first responders rely. The private wireless supporters of the Consensus Plan include the

Industrial Telecommunications Association, the American Mobile Telecommunications Association, the Personal Communications Industry Association, Aeronautical Radio, the Association of American Railroads, Forest Industries Telecommunications, the American Petroleum Institute, the National Stone, Sand and Gravel Association, and the Taxicab, Limousine and Paratransit Association.

The Consensus Plan recognizes that the underlying cause of CMRS – public safety interference is the Land Mobile Radio Band's mixed allocation for different services with conflicting design principles and communications goals, and that the fundamental remedial action necessary in this band is the separation of high-site and low-site system architectures into two distinct spectrum blocks. Accordingly, the Consensus Plan would create two blocks of contiguous spectrum in the 800 MHz Land Mobile Radio Band: a 20 MHz block for non-cellularized (high-site, high-power) operations, and an adjacent 16 MHz block for cellularized (low-site, low-power) system architecture. The non-cellularized block would be composed of three segments. First, the lower 6 MHz, 806–809/851-854 MHz, would be cleared to relocate the current NPSPAC licensees at 821-824/866-869 MHz with Nextel being issued a license for these frequencies. The next 10 MHz, 809–814/854–859 MHz, would remain allocated to interleaved non-NPSPAC public safety, B/ILT, and high-site Specialized Mobile Radio ("SMR") incumbents; these systems have operated and can continue to operate in interleaved spectrum without mutual interference. Finally, a 4 MHz guard band, 814–816/859–861 MHz, would be assigned primarily to campus-type B/ILT systems and other "interference-resistant" B/ILT and high-site SMR systems that can best tolerate some interference from adjacent cellular-type operations.

In addition, the Consensus Plan calls for the Commission to redesignate Nextel's 700 MHz Guard Band spectrum, 4 MHz virtually nationwide, for public safety use, and Nextel's running average of 4 MHz of 900 MHz SMR spectrum to B/ILT and high-site SMR operations. The Consensus Plan would offer an incentive for 800 MHz B/ILT and high-site SMR incumbents to relocate *voluntarily* to 900 MHz by offering them a 50 kHz channel assignment for each 25 kHz 800 MHz channel vacated; such relocation would make additional 800 MHz spectrum available to public safety entities. The Consensus Plan calls for Nextel to be "made whole" with the assignment of a nationwide license for 10 MHz of paired spectrum at 1910-1915/1990-1995 MHz for CMRS.

The Consensus Plan will provide great benefits to the public safety community. So long as NPSPAC licensees remain sandwiched between Nextel and cellular A-block systems, they cannot be protected from unintentional interference resulting from Nextel and cellular A-block systems, both individually and collectively, even though all licenses are operating in full compliance with the Commission's rules. The Consensus Plan relocates NPSPAC licensees to the bottom portion of the 800 MHz Land Mobile Radio Band, where they will have far greater protection from interference. Moving the NPSPAC channels as a block retains the spectrum licensing and spectrum use efficiencies developed over the past decade by NPSPAC regional planning committees. Meanwhile, most non-NPSPAC public safety licensees will not need to move to new spectrum, but will nonetheless be far better protected against interference from cellularized systems.

The Consensus Plan addresses concerns from public safety operators regarding the costs of 800 MHz band restructuring and potential disruption to public safety operations. First, under the terms of the Consensus Plan, public safety operators would

not be required to move unless full funding for such relocation is committed and available on a NPSPAC region-wide basis. Second, the Consensus Plan can be implemented without significant disruption to public safety systems. Nextel has successfully retuned hundreds of land mobile communications systems in the upper 200 SMR channels, including a few public safety systems, and expects similar success in implementing the Consensus Plan.

The Consensus Plan responds to private wireless concerns with Nextel's White Paper proposal. Under the Consensus Plan, all B/ILT and high-site SMRs would remain at 800 MHz, thereby avoiding the equipment replacement costs associated with moving to 900 MHz. The vast majority of private wireless licensees would keep their current channel assignments, or would have to retune only a small proportion of their channels; the only private radio systems that would have to retune are those currently licensed in the new NPSPAC channels at 806-809/851-854 MHz, and they would remain at 800 MHz. Thus, the Consensus Plan responds directly to concerns voiced by Federal Express, Motient, and other private wireless licensees and major utilities with large regional or national communications networks.

As the single largest spectrum holder in the 800 MHz Land Mobile Radio band, Nextel has an essential role in resolving CMRS – public safety interference. Nextel would contribute up to $500 million toward the funding of public safety relocation and would cover its own substantial relocation costs. In order to provide the spectrum "greenspace" necessary for the Consensus Plan realignment, Nextel would exchange spectrum for which it paid approximately $2 billion at auction and in secondary markets. Thus, under the terms of the Consensus Plan, Nextel would receive no spectrum windfall.

Comments advocating relocating all public safety systems to the 700 MHz are unrealistic. The Commission should not delay the resolution of public safety interference and spectrum shortage problems while seeking a 700 MHz alternative, given the legislative obstacles to this use of the 700 MHz band. The problems afflicting public safety communications would only worsen during any extended effort to gain Congressional approval of the multiple statutory changes necessary to adopt this proposal. Apparently, cellular providers such as AT&T Wireless, Cingular, and Verizon Wireless would sacrifice public safety communications in order to prevent Nextel from being reassigned to a contiguous block of 800 MHz spectrum. Nor should the Commission rely on case-by-case mitigation efforts as either the sole response to CMRS – public safety interference or an interim remedy while it pursues the 700 MHz solution. Case-by-case mitigation is inherently reactive, responding only *after-the-fact* to actual instances of interference that jeopardize the lives of emergency personnel and the citizens they protect.

The Compromise Plan would achieve the public interest objectives of this proceeding more completely and efficiently than any other approach. Key representatives of the public safety and private wireless communities understand this reality and offer the Commission a clear route to realizing these goals. The Commission should adopt the Consensus Plan as expeditiously as possible, in order to remedy interference to 800 MHz public safety communications systems and provide badly needed additional spectrum for critical public safety communications.

## TABLE OF CONTENTS

**Before the**
**FEDERAL COMMUNICATIONS COMMISSION**
**Washington, D.C. 20554**

| | | |
|---|---|---|
| In the Matter of | ) | |
| | ) | |
| Improving Public Safety Communications in the 800 MHz Band | ) | |
| | ) | |
| | ) | WT Docket No. 02-55 |
| Consolidating the 900 MHz Industrial/ Land Transportation and Business Pool Channels | ) | |

## REPLY COMMENTS OF NEXTEL COMMUNICATIONS, INC.

## I. INTRODUCTION

Nextel Communications, Inc. ("Nextel") respectfully replies to comments filed in the Notice of Proposed Rulemaking ("*NPRM*") in the above-captioned proceeding.[1] Virtually all of the numerous commenters in this proceeding agree on the urgent necessity of resolving CMRS – public safety interference and providing improved public safety communications capabilities in the 800 MHz band. Most commenters also recognize that CMRS – public safety interference will grow more serious in the absence of decisive corrective action. Accordingly, Nextel continues to urge the Commission to move expeditiously to implement a comprehensive solution to the problem of CMRS – public safety interference in the 800 MHz band.

As the largest 800 MHz mobile radio licensee, Nextel has an essential role to play in this solution and has provided the Commission with a constructive, comprehensive

---

[1] *Improving Public Safety Communications in the 800 MHz Band, Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels*, Notice of Proposed Rulemaking, 17 FCC Rcd 4873 (2002).

spectrum realignment plan for accomplishing these goals.[2] Nextel recognizes, however, that its proposal has generated significant controversy. Since comments were filed on May 6, Nextel has been working with the public safety and private wireless communities on a comprehensive, broadly-supported solution to CMRS – public safety interference.

On June 25, 2002, the Private Wireless Coalition, numerous public safety organizations and Nextel asked the Commission to grant an additional 30 days to file reply comments so that they might more fully develop a "possible compromise proposal." The parties include most of the major public safety and private radio associations, such as the Association of Public Safety Communications Officials-International, Inc. ("APCO"), the International Association of Fire Chiefs, Inc. ("IAFC") and International Municipal Signal Association ("IMSA"), the International Association of Chiefs of Police ("IACP"), the Association of American Railroads ("AAR"), Forest Industries Telecommunications, the Industrial Telecommunications Association ("ITA"), and the Personal Communications Industry Association ("PCIA"). The Commission granted the motion, and the parties have continued to work together under the leadership of the Private Wireless Coalition to craft a solution acceptable to the widest possible cross-section of affected parties.

In contemporaneous joint reply comments filed herein, these parties, along with the Major Cities Chiefs Association ("MCC"), the Major County Sheriffs' Association ("MCSA"), the National Sheriffs' Association ("NSA"), Aeronautical Radio, Inc.

---

[2] *See* "Promoting Public Safety Communications: Realigning the 800 MHz Land Mobile Radio Band to Rectify Commercial Mobile Radio – Public Safety Interference and Allocate Additional Spectrum to Meet Critical Public Safety Needs," Nextel Communications, Inc., ET Docket Nos. 00-258, *et al.* (Nov. 21, 2001) (the "*White Paper*").

("ARINC"), the American Mobile Telecommunications Association ("AMTA"), the American Petroleum Institute ("API"), the National Stone, Sand and Gravel Association ("NSSGA"), and the Taxicab, Limousine and Paratransit Association ("TLPA"), endorse the Private Wireless Consensus Plan (the "Consensus Plan") for improving public safety communications in the 800 MHz band. The above-listed parties and Nextel (collectively, the "Joint Commenters") have described the Plan in detail and explained why adopting it would advance the public interest, convenience, and necessity. ***The signatories to the Consensus Plan include or represent almost all 800 MHz licensees vulnerable to CMRS – public safety interference in the 800 MHz band.***

Nextel fully endorses and supports the Consensus Plan. As discussed further below, the Consensus Plan would create two blocks of contiguous spectrum in the 800 MHz Land Mobile Radio Band: one 20 MHz block, 806-816/851-861 MHz, for non-cellularized (high-site, high-power) operations, and one 16 MHz block, 816-824/861-869 MHz, for cellularized (low-site, low-power) systems. Separating high-site and low-site system architectures into two distinct spectrum blocks is the fundamental remedial action necessary to establish an 800 MHz band plan under which CMRS – public safety interference would be mitigated and ultimately eliminated. The Consensus Plan would satisfy the immediate needs of all affected parties and enable the Commission to achieve its primary objective in this proceeding: solving the public safety spectrum issues that jeopardize the nation's Homeland Security with minimal disruption to incumbent licensees and the existing 800 MHz licensing structure.[3] All parties to the Consensus Plan commit to full cooperation in implementing it as expeditiously as possible, in a

---

[3] *NPRM* ¶ 2.

manner consistent with the ongoing provision of mission-critical public safety communications services.

## II. THE CONSENSUS PLAN: A PRACTICAL, NEAR-TERM APPROACH TO RESOLVING PUBLIC SAFETY SPECTRUM ISSUES

The Consensus Plan satisfies each of the Commission's public policy goals in this proceeding. As discussed in detail in Section IV, it addresses the fundamental spectral causes of CMRS - public safety interference, provides additional near-term spectrum to public safety in the 800 MHz band, and does so with minimal disruption. The plan provides the Commission with a clear path to resolve pressing public safety needs.

Specifically, as noted above, the Consensus Plan would create two blocks of contiguous spectrum in the 800 MHz Land Mobile Radio Band: a 20 MHz block for non-cellularized (high-site, high-power) operations, and an adjacent 16 MHz block for cellularized (low-site, low-power) system architecture. The non-cellularized block would be composed of three segments. First, the lower 6 MHz, 806–809/851-854 MHz, would be cleared for relocating the current NPSPAC channel block, 821-824/866-869 MHz, on a channel-for-channel basis. The next 10 MHz, 809–814/854–859 MHz, would remain allocated to interleaved non-NPSPAC public safety, B/ILT, and high-site Specialized Mobile Radio ("SMR") incumbents, the vast majority of whom would not have to move from their current channel assignments. These licensees operate non-cellular, high-site systems which have traditionally been "good neighbors" and which can continue to co-exist on interleaved channels. Finally, a 4 MHz guard band, 814–816/859–861 MHz, would be assigned primarily to campus-type B/ILT systems and other "interference-resistant" B/ILT and high-site SMR systems that can better tolerate some interference from adjacent cellular-type operations than the critical life-safety communications

systems used by police, fire, rescue, and other emergency public safety services.[4] In contrast to Nextel's "White Paper" realignment plan, the Consensus Plan would keep all B/ILT and high-site SMRs at 800 MHz (unless they elect to relocate voluntarily to 900 MHz); only those currently licensed in the new NPSPAC channels, 806-809/851-854 MHz (channels 1-120), would have to be retuned.

Following realignment, an incumbent licensee in the non-cellular block at 806-816/851-861 MHz could deploy a cellular-like system only if the Commission granted it a waiver permitting such operations. Consistent with the Commission's rules and precedent, in order to receive a waiver, an applicant would have to demonstrate that its system would not contravene the underlying purpose of the prohibition on cellular operations in this spectrum. Specifically, an applicant would have to show conclusively that its proposed operations would not cause interference to public safety operators and other non-cellular systems in the band, and that approval of the waiver would otherwise promote the public interest.

Thus, under the Consensus Plan, Nextel could no longer operate its cellular architecture iDEN® network in the new non-cellular block. Nextel holds numerous site-by-site and Economic Area ("EA") licenses in the lower non-cellular block (channels 1 through 400); under the Consensus Plan, Nextel would relocate from these channels to the cellular block (and replacement spectrum at 1.9 GHz), thereby creating significant

---

[4] Public safety licensees would not be excluded from the guard band. However, these 4 MHz are designated as a guard band in recognition of the likelihood that operations in the cellular block (or the combination of operations there and in the cellular A-band allocation) are likely to produce interference, including intermodulation "hits," on guard band channels. The Consensus Plan anticipates that frequency coordinators will not recommend licensing interference-sensitive or mission-critical communications systems on the guard band channels.

"greenspace" for retuning channels 1-120 incumbents within the non-cellular block. Existing public safety operators relocating from the new NPSPAC block at 806-809/851-854 MHz (channels 1-120) would move to greenspace vacated by Nextel at 809–814/854–859 MHz (channels 121-320). B/ILT and high-site SMR systems leaving the new NPSPAC band would relocate first to the guard band (814–816/859–861 MHz) or, if insufficient space is available or the system is particularly interference-sensitive, to the greenspace in channels 121–320. Incumbent non-Nextel EA licensees on channels 1–120 would move to channels 125-150 in the General Category EA block, if available, or to the lower 80 channel EAs vacated by Nextel. These shifts would clear the new NPSPAC channels so that current NPSPAC licensees can relocate to the new NPSPAC channels in a manner that preserves existing regional frequency use plans and assignments.[5]

With the creation of the new guard band at 814-816/859-861 MHz, public safety licensees in that spectrum can choose to relocate to greenspace in the 809-814/854-859 MHz band to obtain greater separation from cellular-type operators. Public safety operators would have, for up to five years, the exclusive right to apply for additional frequencies from the greenspace resulting from Nextel's migration from the non-cellular

---

[5] In 1986, the Commission released the then-reserved channels at 821-824/866-869 MHz for public safety use. *See Amendment of Parts 2 and 22 of the Commission's Rules Relative to Cellular Communications Systems, Amendment of Parts 2, 15, and 90 of the Commission's Rules and Regulations to Allocate Frequencies in the 900 Mhz Reserve Band for Private Land Mobile Use, Amendments of Parts 2, 22, and 25 of the Commission's Rules to Allocate Spectrum for, and to Establish Other Rules and Policies Pertaining to the Use of Radio Frequencies in a Land Mobile Satellite Service for the Provision of Various Common Carrier Services*, Report and Order, 2 FCC Rcd 1825, ¶ 99 (1986) ("*NPSPAC Order*"). The Commission created 55 Regional Planning Areas for these channels and required the establishment of Regional Planning Area Committees to coordinate the licensing of these channels, including prioritizing competing needs for public safety communications within each region. The Consensus Plan would preserve

block. After that five-year period, all unlicensed channels in the non-cellularized block other than the new NPSPAC channels would be available to B/ILT, high-site SMR, or public safety applicants on a first-come, first-served basis. The Consensus Plan would maintain the existing proportionate U.S. Land Mobile Radio channel allocation in the U.S./Canada and U.S./Mexico border areas.

Moving incompatible non-cellular and cellularized system architectures into separate contiguous blocks is the only way to mitigate effectively CMRS – public safety interference at 800 MHz. The fact that Nextel holds licenses for over half of the Land Mobile Radio channels at 800 MHz requires that it be an integral participant in any realignment that successfully separates these systems. The Consensus Plan requires Nextel to limit its operations at 800 MHz to a 16 MHz contiguous block, in order to minimize incumbent B/ILT, high-site SMR, and public safety licensee relocations and make additional spectrum available at 800 MHz for enhanced public safety communications capabilities, including near-term interoperability solutions. Public safety operators are introducing their newest and most innovative communications solutions in the 800 MHz band; making additional spectrum at 800 MHz available for public safety communications offers real opportunities for enhanced interoperability where it would do the most good. Therefore, to achieve these public interest benefits, the Consensus Plan reduces Nextel's spectrum position at 800 MHz by a running average of 2.5 MHz.

To provide additional spectrum to meet critical public safety communications needs, the Consensus Plan calls for Nextel to return its 700 MHz and 900 MHz licenses

---

the licensing priorities and efficiencies realized by these Committees over the past 15

to the Commission for redesignation. Nextel's 700 MHz Guard Band spectrum, 4 MHz virtually nationwide, would be redesignated for public safety use. The Commission would also redesignate Nextel's running average of 4 MHz of 900 MHz SMR spectrum to B/ILT and high-site SMR operations. The 900 MHz band today is composed of 5 MHz for B/ILT systems and 5 MHz for SMR systems on an interleaved basis. The disparate signal strength of these interleaved high-site and low-site system architectures creates the potential for interference. With Nextel's exchange of its 900 MHz spectrum after completion of the retuning, nearly 10 MHz of 900 MHz spectrum would be available to B/ILT and high-site SMR systems. This would serve the public interest because it would provide needed spectrum for expansion of B/ILT and high-site SMR systems, particularly in congested, high-demand areas. In turn, this would make urgently needed 800 MHz spectrum available to public safety entities. The Consensus Plan would create an incentive for 800 MHz B/ILT and high-site SMR incumbents to relocate voluntarily to the 900 MHz band by offering them a 50 kHz channel assignment for each 25 kHz 800 MHz channel vacated.[6] This incentive would be available for only the first two years of this realignment process.

The Consensus Plan calls for Nextel to be "made whole," *i.e.*, to receive suitable replacement spectrum in return for Nextel's contribution of 4 MHz in the 700 MHz band, 4 MHz in the 900 MHz band, and 2.5 MHz in the 800 MHz band to the realignment plan. Accordingly, the Commission would issue Nextel a nationwide license for 10 MHz of paired spectrum at 1910-1915/1990-1995 MHz for CMRS.

---

years.

[6] This 50 kHz channel assignment may not necessarily be for contiguous 12.5 kHz channels.

The Consensus Plan calls for the Commission to direct the Land Mobile Communications Council ("LMCC"), the Public Safety Regional Planning Committees, and Nextel to work together to create by a date certain a plan to implement the Consensus Plan's proposed realignment. This plan would include the migration steps necessary to clear the new NPSPAC channels for relocation of incumbent NPSPAC licensees and relocate incumbent public safety licensees from the new guard band, as well as a band plan for the reallocated 700 MHz and 900 MHz channels.

To assist in effectuating the Consensus Plan realignment, Nextel would voluntarily provide reimbursement of up to $500 million for relocating public safety licensees consistent therewith.[7] As described in section VI.D.2 below, an independently administered fund would be established to collect and disburse these funds. No public safety licensee would be required to relocate unless funding is available and committed for the eligible relocation costs of that licensee and all other public safety licensees in the affected NPSPAC region. Sources of funding for public safety reimbursement should not, however, be limited to Nextel's voluntary commitment.[8]

Finally, counter to some commenters' claims, Nextel's 700 MHz, 800 MHz, and 900 MHz spectrum holdings are sufficient to execute the Consensus Plan.[9] Nextel has a

---

[7] Nextel's funding commitment is contingent on the Commission adopting the Consensus Plan, including a 16 MHz cellular block from 816-824/861-869 MHz licensed primarily to Nextel, and a 10 MHz replacement spectrum block licensed to Nextel for CMRS services at 1910-1915/1990-1995 MHz.

[8] As set forth in section IV.D.1, *infra,* cellular carriers should also contribute to public safety relocation costs. State and local governments would not be required to provide such funding; however, federal funding should be pursued.

[9] In early-filed reply comments, Small Business in Telecommunications ("SBT") questions Nextel's ability to include spectrum held by Nextel Partners, Inc. ("Nextel Partners") as part of the 800 MHz spectrum that it would return to the Commission.

running average of 18 MHz at 800 MHz in the top 320 markets.[10] The parties to the Consensus Plan have reviewed Nextel's methodology and the Commission's licensing database and have confirmed Nextel's spectrum holdings.[11] They are also confirmed by the Commission's recent response to the July 8 request from Congress for information on

---

Reply Comments of SBT at 47. SBT's doubts here are unfounded. The strategic relationship between Nextel and Nextel Partners will, in fact, facilitate implementation of the Consensus Plan. Although Nextel does not control Nextel Partners, it currently owns approximately 32% of the common stock of Nextel Partners. In return for Nextel Partners' commitment to build out its network outside the largest metropolitan areas upon which Nextel has traditionally focused, Nextel Partners has the exclusive right to offer wireless communications in its licensed markets under the Nextel brand name. These markets now include 55 of the most populous 200 MSAs in the U.S. Nextel Partners has informed Nextel that it stands ready to provide the Commission with any confirmation it may desire of its commitment to the Consensus Plan.

SBT's reply comments contain other frivolous arguments, including a request that the Commission cancel Nextel's 900 MHz and 700 MHz licenses. Reply Comments of SBT at 45-48. This remarkable request is premised on unsupported claims that Nextel is somehow in violation of its 700 MHz Guard Band obligations and should not have been granted – along with all other 900 MHz SMR licensees – additional time until December 31, 2002 to construct its 900 MHz licensed facilities. These claims are ludicrous and have no place in this proceeding. Nextel is fully compliant with the Commission's Guard Band rules and received a valid, well-justified extension of the deadline to construct its 900 MHz licensed systems. *See FCI 900, Inc. Expedited Request for 3-Year Extension of 900 MHz Band Construction Requirements and Neoworld License Holdings, Inc. Request for Waiver of 900 MHz Band Construction Requirements and Petition for Declaratory Ruling*, Memorandum Opinion and Order, 16 FCC Rcd 11072 (2001). Nextel has been selling 800/900 MHz dual band iDEN® handsets since May 2002, and network and base station equipment has been ordered and will be delivered for fourth quarter installation. Nextel fully intends to construct its licensed facilities at 900 MHz and to rely on dual band operations to provide the capacity needed to serve its customers during the realignment transition. Nextel will then vacate 900 MHz as part of the realignment process. It will also make 900 MHz channels available as needed to 800 MHz B/ILT incumbents who choose to migrate voluntarily to 900 MHz, as discussed further herein.

[10] This represents Nextel's usable spectrum position as it excludes channel use encumbered by non-affiliated incumbents within Nextel's EA licensed areas. A listing of Nextel's usable spectrum, city-by-city, calculated as described in Appendix A to Nextel's Comments in this proceeding, is attached at Appendix I to these Reply Comments.

[11] *See* Reply Comments of the Joint Commenters at 17.

licensees' current 800 MHz spectrum holdings.[12] The Commission's analysis, however, did not account for a substantial portion of Nextel's licensed channels. The Commission's spectrum calculations included only site-specific licenses; it did not account for geographic EA licenses and the "white space" contained therein and controlled by those EA licensees.[13] Nextel holds the vast majority of EA licenses in the 800 MHz band, and, as a result of this omission, the Commission credited substantially fewer channels to Nextel than it should have, especially in smaller markets and in those markets where Nextel has canceled individual site-based licenses subsumed by EA authorizations.[14] By failing to include in its tally the spectrum licensed to Nextel under its EA licenses, the Commission significantly undercounted Nextel's 800 MHz spectrum position. At the same time, however, the Commission's market-by-market findings further validate Nextel's 800 MHz spectrum position.[15]

---

[12] *See* "Response to Congressional Request for Licensing Information on Land Mobile Frequencies 806/821 MHz – 851/866 MHz," Wireless Telecommunications Bureau (Jul. 26, 2002), *available at:* <http://wireless.fcc.gov>. *See also* Letter from Michael K. Powell, Chairman, FCC, to the Honorable W.J. (Billy) Tauzin, Chairman, Committee on Energy and Commerce (Jul. 26, 2002).

[13] While not reflected in its channel counts, the Commission's report did recognize the existence of geographic EA licenses and included exhibits listing these geographic licenses and licensees, the range of spectrum covered by these licenses, and a map featuring the relevant EAs.

[14] In a number of markets, Nextel has cancelled "redundant" site-specific licenses where it holds the overlay EA license for that geographic area.

[15] There are other important differences between the Commission's 800 MHz spectrum assessment methodology and that used by Nextel. For example, while the Commission used the Census Bureau's Year 2000 100 most Urbanized Areas ("UAs") for its spectrum counts, Nextel uses 1990 Census Metropolitan Statistical Areas ("MSAs") ranked by 1990 population. These do not correspond with UAs. The Commission's use of UAs in some cases excluded licenses located just outside the UA, but close enough to the UA to allow coverage of that area; in particular, the UA excluded three of the four Commission-recognized mountaintop transmitter sites in the Los

## III. THE RECORD CLEARLY DEMONSTRATES THE URGENCY OF RESOLVING CMRS – PUBLIC SAFETY INTERFERENCE AND THE NEED FOR MORE PUBLIC SAFETY SPECTRUM

The approximately 150 comments filed in this proceeding confirm both the urgency of eliminating CMRS – public safety interference in the 800 MHz band and the crucial need for more near-term spectrum for public safety communications at 800 MHz, particularly to facilitate interoperability. There is virtually no disagreement with either of these points. As a wide variety of parties acknowledge, these problems will become even more severe until the Commission adopts a comprehensive and definitive solution.

### A. The Record Demonstrates that Public Safety Systems are Experiencing Dangerous Levels of Interference

Virtually all public safety commenters agree with the Commission's tentative conclusion that "CMRS interference to public safety systems presents a sufficiently serious problem that a solution must be found."[16] Indeed, many commenters characterize

---

Angeles market, thereby undercounting Nextel's spectrum holdings. In other cases, the UA boundaries included Nextel licenses that are further from the urban core than Nextel considers to be available within that metropolitan area. The Commission also failed to account for the required distance separations among co-channel licensees. On balance, Nextel concludes that the Commission's calculations, by not including EA licenses, significantly understate Nextel's 800 MHz spectrum position.

[16] *NPRM* ¶ 16. *See, e.g.*, Comments of IAFC/IMSA at 2; Comments of New York State Office For Technology at 10; Comments of City of New York at 6; Comments of City of Fort Lauderdale at 2; Comments of State of Florida at 1; Comments of Commonwealth of Virginia at 1; Comments of Fairfax County at 3-4; Comments of Michigan State Police Communications Division at 1. Most non-public safety commenters also agree that 800 MHz interference requires a solution. *See, e.g.*, Comments of Verizon Wireless at 2-4; Comments of CTIA at 1-2; Comments of Southern LINC at 1, 7-8; Comments of Motorola at 1-3; Comments of Motient at 3. (Unless otherwise indicated, all Comments cited are filed in this proceeding, WT Docket No. 02-55.)

the interference problem as "extremely dangerous"[17] and "life threatening."[18] APCO, for instance, states the following:

> The 800 MHz problem is severe, and extremely dangerous to public safety personnel and the general public. The interference occurs most often when a police officer, fire fighter or other "first responder" is using a low-power portable radio to communicate to a distant base station, but is also within a very short distance of a low-elevation cell site using adjacent band frequencies. The result is a "dead zone" around the cell-site (ranging from a few hundred feet to a quarter-mile) where public safety radio communications is disrupted. Even if known in advance, such a dead-zone could endanger public safety operations. However, the police officer, fire fighter, EMS technician or other first responder in the field is unlikely even to be aware that they are operating in a "dead zone" and could unknowingly be missing critical communication. Worse, they could be in a dangerous situation (*e.g.*, a crime-in-progress or building fire) and be unable to use their radio to call for assistance.[19]

Many commenters predict that interference in the 800 MHz band will only grow worse over time. The City of New York, for instance, warns that its "interference problem is bound to grow as non-public safety users increasingly employ a variety of digital transmission technologies."[20] The County of Maui, Hawaii likewise cautions that interference could worsen "[a]s demands for cellular capacity escalates" and "as specific

---

17 Comments of APCO, NACo, NLC & NATOA at 8. *Accord* Comments of Public Safety Improvement Coalition at 2; Comments of Office of the Chief Technology Officer, Government of the District of Columbia at 1; Comments of New York City Transit Authority at 7.

18 Comments of IACP, MCC, NSA & MCSA at 2 ("The entire Public Safety Community, including the Law Enforcement Community . . ., has been experiencing increasing life threatening interference to our communications systems from commercial carriers in the 800 MHz band.")

19 Comments of APCO, NACo, NLC & NATOA at 8.

20 Comments of the City of New York at 6.

frequencies are reused, power levels are increased, and dynamic frequency reassignments are made without coordination with public safety communications officials."[21]

A large majority of commenters agrees that CMRS – public safety interference results primarily from the interleaved nature of the 806-816/851-861 MHz channel allocation and the sandwiching of the public safety NPSPAC band at 821-824/866-869 between digital SMR providers and cellular systems. This configuration places public safety systems and CMRS systems on proximate channels, thereby increasing the likelihood that intermodulation products will fall on nearby licensees and that sideband noise will affect adjacent channel systems.[22] The interleaved, channel-by-channel licensing of many 800 MHz systems makes such interference possible despite compliance by all involved licensees with the Commission's rules and the terms and conditions of their Commission licenses, a fact that most parties do not dispute.[23] Although commenters do not agree in their initial comments on the best approach for eliminating CMRS – public safety interference, most acknowledge the need for an

---

[21] Comments of County of Maui at 2. *See also* Comments of IACP, MCC, NSA & MCSA at 2; Comments of City of Austin, Texas at 1. The County of Maui recognizes a fundamental reality: even if frequency planning could minimize CMRS - public safety interference, the RF environment is not and cannot be so static as to preclude new interference problems. Dynamic frequency plans at CMRS cell sites employing multi-variable, complex algorithms to continually revise channel use in response to demand variances are but one of the developments that make static frequency deployments impossible. Although Nextel does not employ dynamic frequency reassignments in its iDEN® network, this technology is increasingly prevalent in cellular networks.

[22] *See, e.g.,* Comments of APCO, NACo, NLC & NATOA at 10; Comments of CTIA at 3. In services with large contiguous spectrum blocks, such as cellular or PCS, such interference would be controlled on an intra-system basis by the single licensee. In the 800 MHz Land Mobile Radio spectrum, however, such interference can spread on an inter-system basis to other unrelated licensees, disrupting vital communications services.

effective, comprehensive solution. Many of these parties believe that such relief can be achieved only through the type of 800 MHz realignment outlined in the Consensus Plan.[24]

### B. The Record Demonstrates that Public Safety Communications Systems Need Additional Spectrum

In their comments, public safety entities also describe the spectrum shortage currently limiting their operations. They characterize the need for additional spectrum as "exigent,"[25] "serious,"[26] "acute,"[27] "sever[e],"[28] "demonstrated" and "documented,"[29] and "critical,"[30] among other descriptions. Some commenters point out that the Commission has yet to meet the goals set out in the September 1996 report of the Public Safety Wireless Advisory Committee ("PSWAC"),[31] and assert that "a deficit of approximately 23.5 MHz of spectrum still remains from the original recommendations submitted in the

---

23 Nextel Comments at 11. *See also NPRM* ¶ 15 ("Significantly, the interference . . . can occur even though all parties involved may be operating in compliance with the Commission's rules.").

24 *See, e.g.*, Comments of APCO, NACo, NLC & NATOA at 10; Comments of IACP, MCC, NSA & MCSA at 3-5; Comments of County of Maui at 3; Comments of M/A-Com, Inc. at 4-6; Comments of Qualcomm Inc. at 4.

25 Comments of Public Safety Wireless Network ("PSWN") at 5.

26 Comments of APCO, NACo, NLC & NATOA at 2.

27 Comments of New York City Transit Authority at 4.

28 Comments of State of Florida at 1.

29 Comments of IACP, MCC, NSA & MCSA at 3, 6.

30 Comments of Bergen County Police Department at 4.

31 Final Report of the Public Safety Wireless Advisory Committee to the Federal Communications Commission, Reed E. Hundt, Chairman, and the National Telecommunications and Information Administration, Larry Irving, Assistant Secretary of Commerce for Communications and Information, WT Docket No. 96-86 (Sept. 11, 1996) ("*PSWAC Final Report*").

*PSWAC Report*."[32] Worse, according to various commenters, much of the public safety spectrum allocated by the Commission since the PSWAC report cannot even be included in the current public safety total; the 24 MHz of spectrum allocated in the 700 MHz band continues to be inaccessible to public safety systems because of broadcast encumbrances,[33] and the 50 MHz recently allocated to public safety at 4.9 GHz is useful only for "broadband transmissions over very short distances."[34]

Moreover, numerous commenters point out that public safety spectrum needs have grown significantly since the 1996 PSWAC report. National, state, and local Homeland Security efforts are placing ever increasing demands on public safety spectrum resources, and several of the original members of the PSWAC Spectrum Requirements Subcommittee have recently calculated that "public safety actually requires 32 MHz of spectrum beyond the 1996 PSWAC recommendations."[35]

The Homeland Security effort has particularly accelerated the need for additional spectrum for interoperable communications.[36] In a report to the President and Congress

---

[32] Comments of PSWN at 5; *accord* Comments of IACP, MCC, NSA & MCSA at 7 (stating that "there is still a shortfall of 23.5 MHz of spectrum to meet the PSWAC documented needs.").

[33] Comments of IACP, MCC, NSA & MCSA at 7. *See also* Comments of IAFC/IMSA at 8; Comments of New York State Office For Technology at 32-33

[34] Comments of APCO, NACo, NLC & NATOA at 12. *Accord* Comments of IAFC/IMSA at 9; Comments of New York State Office For Technology at 33.

[35] Comments of APCO, NACo, NLC & NATOA at 16. *See also id.* at 16-18 (explaining why public safety spectrum needs have grown faster than PSWAC estimated: *e.g.*, public safety demand for data in the field has increased faster than anticipated; community policing strategies require many more portable radios in the field, multiplying the number of transmissions per day; heightened security measures in the wake of September 11 have placed additional burdens on public safety communications).

[36] Comments of APCO, NACo, NLC & NATOA at 17 ("post-September 11 developments highlight the need for interoperability"); Comments of New York State Office For Technology at 32 ("heightened state of alert" since September 11 means that

released shortly after the September 11 attacks, an anti-terrorist panel emphasized that its "previous recommendations for equipment standardization and interoperability – especially in communications – resonate with greater force following the experiences of recent weeks. This is especially important between non-traditional partners such as law enforcement agencies and the public health medical communities."[37] The report went on to conclude that "[t]here exists an urgent need by public safety agencies for additional spectrum dedicated for interoperable communications."[38]

Several prominent public safety organizations agree that the availability of additional 800 MHz spectrum would greatly enhance public safety interoperability. According to four national law enforcement organizations, for instance,

> [a]dditional 800 MHz spectrum provides the basis for further development and deployment of efficient and interoperable wide-area radio systems, often serving multiple agencies. Also, those agencies that choose to deploy new subscriber equipment which covers both the 800 and 700 MHz band inherently set the stage for expanded interoperability and

---

"[a]ll Public Safety, Fire, EMS, and Police now require the resources not only to interoperate, but also to support operations under the most *extreme* conditions"); Comments of the City of Fort Lauderdale at 5 ("As demonstrated by the events of September 11th we agree that a need for additional interoperability channelsexists.").

[37] Third Annual Report to the President and the Congress, the Advisory Panel to Assess Domestic Response Capabilities for Terrorism Involving Weapons of Mass Destruction, at 55 (Dec. 15, 2001), *available at:* <http://www.rand.org/nsrd/terrpanel> ("*Domestic Response Report*"). These issues are also addressed in a recent report from Arlington County, VA, on its agencies' emergency response to the September 11 attacks on the Pentagon. Arlington County After-Action Report on the Response to the September 11 Terrorist Attack on the Pentagon, at 13, A-18, A-35, A-36, A-37, C-12, C-19, *available at:* <http://www.co.arlington.va.us/fire/edu/about/pdf/after_report.pdf>. This report describes how the lack of radio interoperability among jurisdictions and agencies impeded emergency efforts at the Pentagon. It recommends a comprehensive regional assessment of communications interoperability and a substantial increase in such interoperability for public safety agencies.

[38] *Domestic Response Report,* Appendix K, "Protecting Our Nation, The Immediate Needs of America's Fire Service, Congressional Fire Services Institute *et al.*, at K-4.

communications capacity once the 700 MHz band is cleared of incumbent television operations.[39]

The lack of sufficient 800 MHz spectrum is already acutely felt by various entities, including New York State, which needs such spectrum in order to implement its interoperability-based Statewide Wireless Network ("SWN") Project.[40]

The Consensus Plan would provide additional spectrum for public safety communications. After the proposed band realignment is completed, the remaining Nextel-vacated spectrum in the 800 MHz non-cellular block would be available for five years exclusively to public safety applicants. Nextel would also contribute its 4 MHz Guard Band licenses in the 700 MHz band for public safety use. This spectrum is available now in markets without channels 60–69 television stations, such as Denver and Salt Lake City. In addition, Nextel would contribute its 900 MHz SMR channels for B/ILT and traditional SMR use and provide a 2:1 spectrum incentive for such licensees to relocate voluntarily to the 900 MHz band, in turn clearing more 800 MHz spectrum for public safety services.

The additional 800 MHz spectrum made available to public safety services could be used to expand public safety system capacity nationwide, and to foster interoperability among public safety communications systems within and across administrative, political, and geographic boundaries. Public safety operators would benefit greatly by receiving additional 800 MHz spectrum, since (i) the propagation characteristics of the 800 MHz band are well-suited for the wide-area coverage requirements of public safety systems,

---

[39] Comments of IACP, MCC, NSA, and MCSA at 7. *See also* Comments of IAFC/IMSA at 10 ("additional interoperability channels at 800 MHz would be helpful, particularly for on-scene operations.").

and (ii) a substantial number of public safety operators already operate in this band throughout the country, resulting in even greater economies of scale in the design and production of new equipment for these public safety systems.[41] New and existing public safety systems would be able to take advantage of lower equipment costs, and, with equipment satisfying the APCO 25 standard already available, operators could begin utilizing any newly allocated spectrum without undue costs or delays.

Although the Consensus Plan does not provide as much additional 800 MHz public safety spectrum as proposed in Nextel's White Paper, it nonetheless significantly augments the amount of spectrum available for public safety services and does so in a way that substantially minimizes the disruption of incumbent licensees. In addition, the Consensus Plan calls for ongoing efforts to establish a definite date for clearing UHF broadcasters from the 24 MHz public safety allocation at 700 MHz, and for exploring the future allocation of additional 700 MHz spectrum for use by public safety communications systems.

## IV. THE CONSENSUS PLAN WOULD ACHIEVE THE KEY PUBLIC INTEREST GOALS IN THIS PROCEEDING

The principal goal of the Commission in this proceeding must be to resolve the public safety communications issues that threaten the nation's Homeland Security mission. In its initial comments, Nextel articulated a set of principles that should guide the Commission's decision herein.[42] These are:

---

40 *See* Comments of New York State Office for Technology at 35-36.

41 As noted in Nextel's comments, a number of state governments, including Florida, Michigan, Ohio and Pennsylvania, are investing hundreds of millions of dollars to deploy new systems in the 800 MHz band. Nextel Comments at 7.

42 Nextel Comments at 16-18.

- The proposal must provide an effective, long-term solution to the problem of CMRS – public safety interference in the 800 MHz band.

- The proposal must ensure that licensees relocated from the 800 MHz band receive suitable replacement spectrum on a "kHz-for-kHz" basis.

- The proposal must permit timely implementation.

- The proposal should minimize burdens on existing licensees consistent with the Commission's other public interest goals.

- The proposal should make additional spectrum available in the 800 MHz band to public safety systems.

Nextel respectfully submits that the Consensus Plan is the most practical, near-term way to improve public safety communications at 800 MHz consistent with these important public interest objectives.

### A. Realignment of the 800 MHz Band Would Substantially Eliminate CMRS – Public Safety Interference

Some opponents of Nextel's original proposal argue that spectrum realignment would not significantly reduce CMRS – public safety interference. In fact, as explained in the Technical Statement of Leonard Cascioli (the "Cascioli Technical Statement") attached hereto as Appendix II, an 800 MHz spectrum realignment of the kind proposed in the Consensus Plan (and in Nextel's original proposal) would substantially reduce CMRS – public safety interference.[43] The Consensus Plan and Nextel's original plan would substantially reduce "intermodulation" ("IM"), the most frequent cause of CMRS – public safety interference.

As described in the attached Cascioli Technical Statement, the Consensus Plan's proposed relocation of public safety licensees out of the 821-824/866-869 MHz NPSPAC

---

[43] As explained in Section III, *supra*, the Consensus Plan would also provide additional spectrum to public safety systems.